

ABSTRACT

An ink jet head (1), a substrate (13) receiving a liquid drop (2) discharged from the ink jet head (1), a device for irradiating or reflecting light from a nozzle hole or its vicinity of the ink jet head (1) toward the substrate (13), a position moving device (10) for controlling a relative position between the ink jet head (1) and the substrate (13), and a control device (9) for discharging a liquid from the ink jet head (1) are included. A light-receiving element (6) for recognizing a position of the ink jet head (1) is disposed behind the substrate (13), when seen from the ink jet head (1), the substrate (13) has a transparency at least to a degree that the irradiated light or the light reflected from the nozzle hole or its vicinity toward the substrate (13) enters the light-receiving element (6), and the light-receiving element (6) senses the irradiated light or the light reflected from the nozzle hole or its vicinity toward the substrate (13). Consequently, even if the distance between the ink jet head and the substrate is small, the relative position between the ink jet head and the substrate is adjusted accurately.